Your
Seattle
City Light

Robert H. Murray, Superintendent
Charles Royer, Mayor

July 10, 1979

Donald W. Smith
Airport Manager
King County International Airport
P.O. Box 80245
Seattle, WA 98108

Dear Mr. Smith:

Georgetown Steam Plant

The purpose of this letter is to provide you with an update of Seattle City Light's considerations regarding the Georgetown Steam Plant and to request a similar update from your agency regarding King County International Airport plans and policies related to the subject property and immediate vicinity. As you may recall, City Light initiated preparation of an Environmental Impact Statement (EIS) in 1977 on a proposal to surplus the property. This EIS was not issued due to higher competing priorities.

In the interim we have recognized the need to expand the scope of the study to look at certain options available to the utility in more detail. This attitude is largely due to the historic significance of the facility. The options include: utilizing the plant as an educational resource in some capacity, recovering use of the plant as an emergency resource and redeveloping the plant to exercise the efficiencies inherent in a cogeneration system. A discussion of the effects these alternatives have upon airport operations will, of necessity, be included in the Draft EIS.

Please advise me whether the information contained in your April 26, 1973, "Review of the Obstruction Removal Program for Boeing Field International" (see enclosed pages 1-6) is still applicable to a discussion of the effects of leaving the plant in the North Clear Zone. In addition, if there is an updated Obstruction Removal Program and/or revisions to the Federal Aviation Administration grant stipulations and regulations relevant to the Georgetown property, it would be very helpful if you could forward them to my staff.

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I sincerely appreciate your help to date in providing information for preparation of the EIS. Please direct supplemental material to Laurie Geissinger, Environmental Analyst, (206) 625-3462, 1015 Third Avenue, Room 926, Seattle, Washington 98104. She will be available to answer any questions you may have concerning this request.

Sincerely,

Pete Henault, Director
Office of Environmental Affairs

LG:js
Enclosure:

REVIEW OF THE OBSTRUCTION REMOVAL PROGRAM

for

BOEING FIELD INTERNATIONAL - KING COUNTY AIRPORT

RUNWAY 13R

OAK TREES

City Park Department has been contacted and King County is working on the removal of the trees. It is anticipated that the trees will be removed in the near future. The estimated cost is $500. The ceiling minimum would be lowered from 400 feet to 315 feet.

LIGHT STANDARD

Boeing Company removed the light pole December 20, 1972.

POWER POLES

City Light has agreed to remove three poles and lower four others to meet the 34:1 slope. Estimated cost is $25,000. This project will be submitted in the 1973 Request for Aid.

FLOODLIGHTS

Inasmuch as the removal plan indicated that these floodlights owned by The Boeing Company were to be removed prior to September 1, 1973, it is now felt very little benefit would be gained at this time. The floodlights are located along the row of blast fences where the larger aircraft, such as the B-747, B-707, and B-727, are parked waiting delivery to the airlines. The floodlights which have obstruction markings and lighting are 470 feet from the centerline of Runway 13R/31L and, thus, are in the Primary Surface. The tails of the parked aircraft and the blast fences are obstructions and are just as serious as are the floodlights.

Removal of just the floodlights would serve no purpose. Relocation of the floodlights, parked aircraft and blast fences to a point outside the Primary Surface would cost over $100,000. and would reduce the useability of the apron. Also, relocation of the obstructions from the Primary Surface to the Transitional Surface would mean no practical measure of safety.

Total removal of the obstructions and stopping the use of the apron for parking the larger aircraft would mean abandonment of a sizable investment in the apron, and would seriously disrupt the use of The Boeing Company's facilities fronting the apron.

In any event, the removal of the floodlights would not afford any benefits in terms of reducing landing minimums or visibility requirements. Only after the 34:1 Approach Surface is free of obstructions would the removal of the floodlights help improve the safety of the Airport.

Therefore, King County requests that the removal of these floodlights be eliminated from the Obstruction Removal Program. Should the function of the apron be changed in a significant manner to allow the removal of these floodlights without adverse effect, then this item would be reinstated in the plan. Under no circumstances should any new obstructions be allowed in the area as a result of being sheilded by existence of the floodlights.

SMOKESTACK

King County has been working with the owner, Rainier Ice & Cold Storage Company, for the removal or lowering of the smokestack. A mechanical engineer has been retained to determine the feasibility of lowering the smokestack by twelve feet to meet the 34:1 Approach Surface. The smokestack will be lowered at an estimated cost of $10,000. This project will be submitted in the 1973 Request for Aid.

STANDBY POWER PLANT

The removal of the standby power plant owned by Seattle City Light is a complex problem. The removal of this major obstruction would greatly improve the safety of the Airport. On the other hand, the difficulties in obtaining the right to remove the structure, as well as the cost of demolition, make progress toward the eventual removal very slow. To best understand this problem, the past events, the cost of acquisition and removal, and the benefits of removal, need to be discussed.

The standby power plant was built in 1909 for the Seattle Electric Company which later became Puget Sound Power & Light Company. In 1951, Seattle City Light took over the plant.

Originally, it was designed to burn coal, but later it was converted to oil. When built, the steam plant had two tall stacks, one 268 feet high, which were removed when Boeing Field was developed in the 1930's.

The plant saw its last regular service during World War II. Since then, it has been used as a standby system. In this capacity it was fired up in 1952, 1964 and 1968 for short periods of time during power shortages.

The plant is antiquated and could not stand continued use beyond a few days, without serious problems. However, its 16 water tube boilers and 3 turbo-generators have a peak capability of 21,000 KW, and an average energy capability of 15,000 KW.

Along with the Lake Union Steam Plant, which has a peak capability of 40,000 KW, the Georgetown Steam Plant serves a twofold purpose for Seattle City Light:

1) It can produce power that might be needed during a short period of extremely heavy demand (or power shortage), and

2) City Light gets an estimated $500,000. credit annually, when it purchases power for Seattle from the Bonneville Power Administration for the backup power capability that the Georgetown Steam Plant can produce if it is needed by the Bonneville Power Administration.

Even though City Light will give no dollar figure for the purchase of the plant, it has been informally suggested that the $500,000. per year credit from the Bonneville Power Administration be amortized for a 10-year period. This means a minimum cost of five million dollars for its purchase. The cost of demolition is difficult to assess in view of the potential salvage value of the machinery and materials in the plant. A price of $100,000. for demolition will be assumed. Thus, the total cost of acquisition and demolition is estimated to be $5.1 million.

Another method of estimating the cost of the plant would be to determine the cost of a replacement generating station at a different site. An approximate cost for a replacement plant would be $3 million. Again, the cost of demolition would be added to this figure, so the total cost would be $3.1 million. A minimum time period for completion of a replacement plant would be 5 years.

Seattle City Light foresees no replacement or abandonment for the Georgetown steam plant in the future. As witnessed by the public outcry at the proposed raising of high Ross Dam, and the siting of a new nuclear generating station on Klickitat Island to serve the growing energy needs of Seattle, it is difficult to see the public accepting the bill for a new standby plant when the Georgetown plant is still useable. Also, the actual siting of a new plant would be difficult in view of the emergence of an environmental awareness.

The removal of the Georgetown plant would have an immediate effect on the visibility requirement. At the present time, the visibility minimum is one mile. With the removal of the steam plant, and the lowering of the smokestack at the Rainier Ice & Cold Storage plant, and removal of the City Light power poles as discussed previously, this figure could drop to 3/4 of a mile. If it weren't for the Zellerbach Paper Company building, which has an effective glide slope of 29:1, the visibility minimum could drop to 1/2 of a mile.

Based on weather data from the Climatology Handbook for the Columbia Basin, the average annual frequency of occurrence for Boeing Field to be closed, due to either visibility less than one mile or a ceiling height less than 300 feet (the ceiling minimum based on removal of the oakd trees discussed above), is 2.5 percent. The frequency of occurrence for visibility less than one mile, and ceiling heights above 300 feet, is 1.2 percent. These frequencies are about double for the months from September to February. It is estimated from the data that the frequency of occurrence for visibility to be between 3/4 and 1 mile, with a ceiling height about 300 feet, is 1 percent for the critical six-month period.

This information can be expressed in terms of the number of flights that would be delayed or diverted during the period of time between visibilities of 3/4 and 1 mile. In approximate terms, during the period from September to February, the time for visibilities between 3/4 and 1 mile would be one hour per day, during the hours between 5:00 am and 11:00 am.

For Cascade Airways, which has 8 operations per day in the early morning hours, the estimated number of flights affected is ten per month. However, in general, these flights would be delayed and not cancelled, and thus the cost due to low visibility would be the ground time of the aircraft and crew. For Cascade Airways, it is estimated that $5,000. would be saved if the visibility minimum is lowered from one mile to 3/4 of a mile.

For the charter and travel clubs using Boeing Field, the number of flights delayed due to visibilities between 3/4 and 1 mile, is estimated at ten per year. In general, their operations take place in the afternoon and evening hours, with much of their activity in the Spring and Summer months. The annual savings for this type of operation is estimated to be $3,000. if the visibility minimum was lowered to 3/4 of a mile.

Another major user affected by inclement weather conditions is The Boeing Company. At the present time, their operations are scheduled with the weather in mind. Lowering the visibility minimum would give them more flexibility. The people in charge of their operations have expressed enthusiasm for lowering the minimums. However, it is difficult to put a monetary figure on lowering the minimums since they normally do not have delays due to the weather, but the operation is scheduled around the weather. A $15,000. annual savings is assumed.

Boeing Field serves as the alternate airport for Seattle-Tacoma Airport. In the past, we have had about thirty planes a year diverted to the Airport. This means an annual revenue of about $4,000. Lowering our minimums should increase this number. However, Seattle-Tacoma Airport has improved its minimums on the new runway to a value of 1200 RVR, or about 1/4 of a mile, so the number of diversions will probably be cut in half. Thus, lowering the visibility to 3/4 of a mile will mean an annual revenue of $2,000. from diverted flights.

No significant monetary benefits are expected to be derived from the general aviation users as a result of lowered minimums. Most of these users fly only in good weather.

From the above discussion, an annual savings of $25,000. is estimated as a result of lowered minimums. This figure is far removed from the annual credit of $500,000. City Light gets for retaining the Georgetown steam plant. King County cannot justify that large an expenditure for so little benefit.

In summation, the problem is a matter of comparing one public need with another. The removal of the Georgetown steam plant would affect all of City Light's users in terms of higher rates to make up for the $500,000. annual credit that would be lost. From the aviation viewpoint, the removal of this obstruction would provide greater safety and a small monetary benefit to the users of the Airport. Clearly, the greater public need is to retain the power plant.

King County feels that the Federal Aviation Administration was unreasonable in its stipulation for King County to acquire the Georgetown steam plant property. Under the FAAP 9-45-040-C618 Grant stipulation, the F.A.A. would have the County spend $4-5 million (with federal aid) for the right to receive $44,380. in federal money. Therefore, King County requests this stipulation be deleted from that Grant Agreement.

In terms of the Obstruction Removal Program submitted in our ADAP-02 Program, the removal of the standby power plant should remain as a desirable goal. However, no date for removal will be shown. Should the value of this structure change significantly, or circumstances change to make it easier for the County to acquire the power plant, then a new feasibility study will be undertaken.

ZELLERBACH PAPER COMPANY BUILDING

The removal of the Zellerbach Paper Company building involves many problems, as did the City Light Power Plant. Built along with the Georgetown Steam Plant in 1909, it housed the electric streetcar trolleys and shops. In 1918, the Seattle Transit Corporation took over the building. During World War II, it was sold to Puget Sound Sheet Metal Works, who used it to fabricate airplane parts for The Boeing Company. After the war, it was sold to the Zellerbach Paper Company, who is the present owner.

The building serves as an office for Zellerbach's central engineering division, and as a warehouse for the central distribution center. In 1970, the office portion was extensively remodeled. The estimated value of the land (9.2 acres) and buildings is $4 million.

The building has a high point at 44 feet MSL, which penetrates the 34:1 slope by 4 feet. The closest part of the structure is 280 feet from the runway centerline. Over 80 percent of the building and land lies within the Approach Surface.

Removal of this obstruction could mean that the visibility minimum could be lowered to 1/2 of a mile, if the other obstructions such as the Georgetown steam plant and the power poles were removed. The monetary benefits would be very similar to those discussed under the Standby Power Plant. Approximately $25,000. could be saved annually if the minimums were lowered.

Inasmuch as the costs far exceed the benefits of removal of the Zellerbach building, it is not advisable to proceed with acquisition and demolition at this time. However, the feasibility of removal should be updated from time to time to account for changes in function and ownership. Removal of the building is still a desirable goal and, therefore, should the cost of acquisition drop to a reasonable value, King County will program its removal. In the interim, it is recommended that obstruction lights be installed on the structure to improve nighttime safety.

13R SUMMARY

OAK TREES

This obstruction will soon be removed, lowering the ceiling height to 315 feet.

LIGHT STANDARD

Obstruction previously removed.

POWER POLES

These obstructions will be lowered or removed (or under contract for removal or lowering) prior to September 1, 1973. This project will be included in the 1973 Request for Aid.

FLOODLIGHTS

Removal of these obstructions are deemed infeasible in terms of a high cost of removal versus no measurable improvement in minimums.

SMOKESTACK

This obstruction is programmed to be lowered prior to December 31, 1973. It will be included in the 1973 Request for Aid.

STANDBY POWER PLANT

Removal of this obstruction is deemed to be infeasible in terms of high removal costs versus low monetary benefits and in terms of meeting a greater public need. King County requests deletion of this item from the Grant Agreement for FAAP 9-45-040-C618.

ZELLERBACH PAPER COMPANY BUILDING

Removal of this obstruction is deemed to be infeasible because of a high removal cost versus little benefit. Removal of the structure would be desirable if conditions change to make acquisition more feasible.